<u>AMENDMENTS TO THE CLAIMS:</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- (Currently Amended) An antiwear composition for use as an additive for lubricants,
 comprising:
 - (1) an organo borate ester composition; and
 - (2) one or more components selected from the group consisting of:
 - (i) 1,3,4-thiadiazole compounds of the formula (I):

$$R \longrightarrow S \longrightarrow R^1 \qquad (I)$$

wherein R and R¹ are independently selected from hydrogen and C₈₋₁₂ thioalkyl or hydrogen, C₁₋₂₂-alkyl groups, terpene residue and maleic acid residue of the formula:

and R^2 and R^3 represent C_{1-22} -alkyl and C_{5-7} -cycloalkyl groups, R or R^4 and either R^2 or R^3 may be hydrogen, wherein the ratio of organo borate ester to the 1, 3, 4 – thiadiazole compound is 1:3 to 15:1,

(ii) bisdithiocarbamate compounds of the formula (II):

Page 2 of 17

$$\mathbb{R}^{5}$$
 \mathbb{R}^{8}
 \mathbb{R}^{7}
 \mathbb{R}^{7}
 \mathbb{R}^{7}
 \mathbb{R}^{7}

wherein R⁴, R⁵, R⁶, and R⁷ are aliphatic hydrocarbyl groups having 1 to 13 carbon atoms and R⁸ is an alkylene group having 1 to 8 carbon atoms, wherein the ratio of organo borate ester: bisdithiocarbamate is 1:6 to 15:1;

(iii) dithiocarbamates of the formula (III):

$$\begin{pmatrix}
R^9 \\
N \\
S
\end{pmatrix}$$

$$N + n \\
(III)$$

wherein R⁹ and R¹⁰ represent alkyl groups having 1 to 8 carbon atoms, M represents metals of the periodic groups IIA, IIIA, VA, VIA, IB, IIB, VIB, VIII and a salt moiety formed from an amine of the formula:

R¹¹, R¹² and R¹³ being independently selected from hydrogen and aliphatic groups having 1 to 18 carbon atoms and n is the valence of M;

Page 3 of 17

or the formula (IV):

where R⁴, R⁵, R⁶, and R⁷ are aliphatic hydrocarbyl groups having 1 to 13 carbon atoms and R⁸ is an alkylene group having 1 to 8 carbon atoms; wherein the ratio of organo borate ester: dithiocarbamate is 1:15 to 15:1

(iv) phosphorodithioates of the formula (V):

$$\begin{bmatrix} X^1 & & & \\ R^{14} & O & & \\ & & &$$

wherein X¹ and X² are independently selected from S and O, R¹⁴ and R¹⁵ represent hydrogen and alkyl groups having 1 to 22 carbon atoms, M represents metals of the periodic groups IIA, IIIA, VA, VIA, IB, IIB, VIB, VIII and a salt moiety formed from an amine of the formula:

R¹⁶, R¹⁷ and R¹⁸ being independently selected from hydrogen and aliphatic groups having

Page 4 of 17

1 to 18 carbon atoms and n is the valence of M, wherein the ratio of organo borate ester: phosphorodithioate is 1:15 to 15:1; and

(v) phosphorodithioate esters of the formula (VI):

$$R^{19}$$
 O R^{21} O R^{22} O R^{22}

wherein R¹⁹, R²⁰, R²¹, and R²² may be the same or different and are selected from alkyl groups having 1 to 8 carbon atoms; wherein the ratio of organo borte ester: phosphorodithicate ester is 1:15 to 15:1; and

- (vi) a non-sulfur molybdenum additive prepared by reacting (a) about 1.0 mole of fatty oil having 12 or more carbon atoms, (b) about 1.0 to 2.5 moles diethanolamine and (c) a molybdenum source—, wherein the ratio of organo borate ester: non sulfur molybdenum additive is 1:15 to 15:1.
- 2. (Original) The composition of claim 1, wherein the borate ester composition is the reaction product formed by reacting about 1 mole fatty oil, about 1.0 to 2.5 moles diethanolamine followed by subsequent reaction with boric acid to yield about 0.1 to 3 percent boron by mass.
- 3. (Original) The composition of claim 2, wherein the borate ester composition comprises about 0.8-1.2 % boron.

- 4. (Cancelled)
- 5. (Cancelled)
- 6. (Original) The composition of claim 3, wherein component (2) comprises (iii) the dithiocarbamates.
- 7. (Currently Amended) The composition of claim 6-1, wherein the ratio of component (1) to component (2) is about 2:1 to 1:1.
- 8. (Original) The composition of claim 3, wherein component (2) comprises (ii) the bisdithiocarbamates.
- 9. (Original) The composition of claim 8, wherein the ratio is about 1:4 to 9:1.
- 10. (Original) The composition of claim 3, wherein component (2) comprises (iv) the phosphorodithioates.
- 11. (Original) The composition of claim 3, wherein component (2) comprises (v) phosphorodithioate esters.
- 12. (Original) The composition of claim 3, wherein component (2) comprises the non-sulfur molybdenum additive of (vi).
- 13. (Original) The composition of claim 12, wherein the ratio is about 1:1 to 3:1.
- 14. (Original) The composition of claim 3, wherein component (2) comprises (i) the thiadiazoles.

- 15. (Original) The composition of claim 14, wherein the ratio is about 3:7 to 9:1.
- 16. (Original) A lubricating composition comprising a major portion of an oil of lubricating viscosity and about 0.1 to about 10.0 percent by mass, based on the total mass of the lubricating composition, of the additive composition of claim 1.
- 17. (Previously Presented) The lubricating composition of claim 16, wherein component (2) of the additive composition comprises a phosphorodithicate of formula V

$$\begin{bmatrix} X^1 & & & \\ R^{14} & & & \\$$

wherein X¹ and X² are independently selected from S and O, R¹⁴ and R¹⁵ represent hydrogen and alkyl groups having 1 to 22 carbon atoms, M represents metals of the periodic groups IIA, IIIA, VA, VIA, IB, IIB, VIB, VIII and a salt moiety formed from an amine of the formula:

R¹⁶, R¹⁷ and R¹⁸ being independently selected from hydrogen and aliphatic groups having 1 to 18 carbon atoms and n is the valence of M,

wherein the phosphorus content is less than 0.05% by mass, based on the total mass of the lubricating composition.

- 18. (New) A method for providing increased antiwear protection to an engine, said method comprising the step of using a lubricating composition comprising
- (1) an organo borate ester composition; and
- (2) one or more components selected from the group consisting of:
 - (i) 1,3,4-thiadiazole compounds of the formula (I):

$$R = S = R^{\uparrow} \qquad (I)$$

wherein R and R⁴ are independently selected from hydrogen and C₈₋₁₂ thioalkyl or hydrogen, C₁.

22-alkyl groups, terpene residue and maleic acid residue of the formula:

and R^2 and R^3 represent C_{1-22} -alkyl and C_{5-7} -cycloalkyl groups, R or R^1 and either R^2 or R^3 may be hydrogen, wherein the ratio of organo borate ester to the 1, 3, 4 – thiadiazole compound is 1:3 to 15:1,

(ii) bisdithiocarbamate compounds of the formula (II):

$$\mathbb{R}^{5} \xrightarrow{\mathbb{R}^{8}} \mathbb{R}^{8} \xrightarrow{\mathbb{R}^{7}} \mathbb{R}^{7}$$
 (II)

Page 8 of 17

wherein R⁴, R⁵, R⁶, and R⁷ are aliphatic hydrocarbyl groups having 1 to 13 carbon atoms and R⁸ is an alkylene group having 1 to 8 carbon atoms, wherein the ratio of organo borate ester: bisdithiocarbamate is 1:6 to 15:1;

(iii) dithiocarbamates of the formula (III):

$$\begin{pmatrix}
R^{9} \\
N \\
S
\end{pmatrix}$$

$$M + n$$

$$(III)$$

wherein R⁹ and R¹⁰ represent alkyl groups having 1 to 8 carbon atoms, M represents metals of the periodic groups IIA, IIIA, VA, VIA, IB, IIB, VIB, VIII and a salt moiety formed from an amine of the formula:

 R^{11} , R^{12} and R^{13} being independently selected from hydrogen and aliphatic groups having 1 to 18 carbon atoms and n is the valence of M;

or the formula (IV):

where R⁴, R⁵, R⁶, and R⁷ are aliphatic hydrocarbyl groups having 1 to 13 carbon atoms and R⁸ is an alkylene group having 1 to 8 carbon atoms; wherein the ratio of organo borate ester: dithiocarbamate is 1:15 to 15:1

(iv) phosphorodithioates of the formula (V):

$$\begin{bmatrix} X^1 & & & \\ & & &$$

wherein X¹ and X² are independently selected from S and O, R¹⁴ and R¹⁵ represent hydrogen and alkyl groups having 1 to 22 carbon atoms, M represents metals of the periodic groups IIA, IIIA, VA, VIA, IB, IIB, VIB, VIII and a salt moiety formed from an amine of the formula:

R¹⁶, R¹⁷ and R¹⁸ being independently selected from hydrogen and aliphatic groups having 1 to 18 carbon atoms and n is the valence of M, wherein the ratio of organo borate ester: phosphorodithioate is 1:15 to 15:1; and

Page 10 of 17

(v) phosphorodithioate esters of the formula (VI):

$$R^{19}$$
 O R^{21} O O R^{22} O O R^{22}

wherein R¹⁹, R²⁰, R²¹, and R²² may be the same or different and are selected from alkyl groups having 1 to 8 carbon atoms; wherein the ratio of organo borte ester: phosphorodithioate ester is 1:15 to 15:1; and

(vi) a non-sulfur molybdenum additive prepared by reacting (a) about 1 0 mole of fatty oil having 12 or more carbon atoms, (b) about 1.0 to 2.5 moles diethanolamine and (c) a molybdenum source, wherein the ratio of organo borate ester: non sulfur molybdenum additive is 1:15 to 15:1,

to thereby increase the antiwear protection of the engine.